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     CAS/STN FILE 'HCAPLUS' ENTERED AT 07:59:14 ON 11 MAY 2006
L1          2163 SEA ABB=ON  PLU=ON  ELECTRIC DOUBLE LAYER/TI
L2           221 SEA ABB=ON  PLU=ON  L1 AND (PROCESS#### OR METHOD OR MAKING OR
                 FABRICATING OR PRODUC#####)/TI
L3            46 SEA ABB=ON  PLU=ON  L2 AND (SHEET#### OR ELECTRODE)/TI
L4                 SEL PLU=ON  L3 1- IC IPC ECLA NCL FTERM :     212 TERMS

     FILE 'REGISTRY' ENTERED AT 08:00:46 ON 11 MAY 2006
L5       781830 SEA ABB=ON  PLU=ON  PVA OR ALCOHOL OR METHANOL OR PROPANOL OR
                 ISOPROPANOL OR ETHANOL OR BUTANOL OR HEXANOL OR HEPTANOL OR PENTANOL
L6         7348 SEA ABB=ON  PLU=ON  L5 AND C H/ELF
L7       223144 SEA ABB=ON  PLU=ON  L5 AND C H O/ELF
L8       189187 SEA ABB=ON  PLU=ON  L7 AND (PROPANOL OR ISOPROPANOL OR ETHANOL
                 OR METHANOL OR ALCOHOL OR PVA OR POLYVINYL? OR POLY VINYL############)
L9        33354 SEA ABB=ON  PLU=ON  L7 NOT (L8 OR L6)

     FILE 'HCAPLUS' ENTERED AT 08:05:26 ON 11 MAY 2006
L10      211358 SEA ABB=ON  PLU=ON  L4
L11       24406 SEA ABB=ON  PLU=ON  (ALCOHOL OR SOLVENT OR SHEET####(3A)ELECTRO
                 DE) AND (L10 OR EDL OR EDLC OR ELECTRIC DOUBLE LAYER#### OR
                 DOUBLE LAYER#### CAPACITOR)
L12      211358 SEA ABB=ON  PLU=ON  L4
L13         395 SEA ABB=ON  PLU=ON  PVA AND (L12 OR EDL OR EDLC OR ELECTRIC
                 DOUBLE LAYER#### OR DOUBLE LAYER#### CAPACITOR)
L14       24517 SEA ABB=ON  PLU=ON  L11 OR L13
L15        1249 SEA ABB=ON  PLU=ON  L6 AND (L12 OR EDL OR EDLC OR ELECTRIC
                 DOUBLE LAYER#### OR DOUBLE LAYER#### CAPACITOR)
L16       18623 SEA ABB=ON  PLU=ON  L8 AND (L12 OR EDL OR EDLC OR ELECTRIC
                 DOUBLE LAYER#### OR DOUBLE LAYER#### CAPACITOR)
L17        2313 SEA ABB=ON  PLU=ON  L9 AND (L12 OR EDL OR EDLC OR ELECTRIC
                 DOUBLE LAYER#### OR DOUBLE LAYER#### CAPACITOR)
L18         281 SEA ABB=ON  PLU=ON  (ALCOHOL OR SOLVENT OR PVA OR ?PROPANOL?)
                 AND ELECTRODE(4A)SHEET#######
L19         537 SEA ABB=ON  PLU=ON  (ALCOHOL OR SOLVENT OR PVA OR ?PROPANOL?)
                 AND DOUBLE LAYER##### AND ?CAPACITOR?
L20       35310 SEA ABB=ON  PLU=ON  L14 OR L15 OR L16 OR L17 OR L18 OR L19
L21        6913 SEA ABB=ON  PLU=ON  (ALCOHOL OR SOLVENT OR PVA OR ?PROPANOL?)(7A) ELECTRODE
L22        6619 SEA ABB=ON  PLU=ON  (ALCOHOL OR SOLVENT OR PVA OR ?PROPANOL?)(7A) SHEET#######
L23       13990 SEA ABB=ON  PLU=ON  (ALCOHOL OR SOLVENT OR PVA OR ?PROPANOL?)(7A) BINDER
L24      149557 SEA ABB=ON  PLU=ON  (ALCOHOL OR SOLVENT OR PVA OR ?PROPANOL?)(7A)  (KNEAD##### OR FORM#### OR
MOULD#### OR MOLD#### OR ROLL#### OR ADD#### OR ADDIT######)
L25           45 SEA ABB=ON  PLU=ON  L20 AND L21 AND L22
L26            6 SEA ABB=ON  PLU=ON  L25 AND L23
L27           14 SEA ABB=ON  PLU=ON  L25 AND L24
L28       10355 SEA ABB=ON  PLU=ON  L20 AND (WT### OR VOL OR VOLUME OR WEIGHT
                 OR PERCENT#### OR CENT OR CONCENTRATION OR CC OR CM OR CM3 OR GM OR GRAM OR LITER OR G(1W)L)
L29        5625 SEA ABB=ON  PLU=ON  L20 AND (L21 OR L22 OR L23 OR L24)
L30        1773 SEA ABB=ON  PLU=ON  L28 AND L29
L31        4980 SEA ABB=ON  PLU=ON  L20 AND (1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7
                 OR 8 OR 9 OR 10)(3W)(WT### OR VOL OR VOLUME OR WEIGHT OR
                 PERCENT#### OR CENT OR CONCENTRATION OR CC OR CM OR CM3 OR GM
                 OR GRAM OR LITER OR G(1W)L)
L32         884 SEA ABB=ON  PLU=ON  L30 AND L31
L33          20 SEA ABB=ON  PLU=ON  L32 AND ELECTRODE######(4A)SHEET######
L34          12 SEA ABB=ON  PLU=ON  L32 AND ELECTRODE######(4A)FILM
L35          28 SEA ABB=ON  PLU=ON  L32 AND ELECTRODE######(4A)MATERIAL
L36          17 SEA ABB=ON  PLU=ON  L32 AND ELECTRODE######(4A)FORMING
L37           5 SEA ABB=ON  PLU=ON  L32 AND ELECTRODE######(W)LAYER
L38         115 SEA ABB=ON  PLU=ON  (L25 OR L26 OR L27) OR (L33 OR L34 OR L35 OR L36 OR L37)
L39           4 SEA ABB=ON  PLU=ON  L38 AND SOLVENT(7A)ALCOHOL
L40           0 SEA ABB=ON  PLU=ON  L38 AND SOLVENT(7A)PVA
L41           1 SEA ABB=ON  PLU=ON  L38 AND SOLVENT(7A)?PROPANOL?
L42           5 SEA ABB=ON  PLU=ON  L39 OR L41
L43           1 SEA ABB=ON  PLU=ON  US2004128813/PN
L44             SEL PLU=ON  L43 1- RN :       7 TERMS
L45      858383 SEA ABB=ON  PLU=ON  L44
L46           1 SEA ABB=ON  PLU=ON  L43 AND L45
L47           4 SEA ABB=ON  PLU=ON  L42 NOT L43
L48           1 SEA ABB=ON  PLU=ON  JP11297579/PN
L49             SEL PLU=ON  L48 1- RN :       8 TERMS
L50       46267 SEA ABB=ON  PLU=ON  L49
L51           1 SEA ABB=ON  PLU=ON  L48 AND L50

     FILE 'STNGUIDE' ENTERED AT 08:23:14 ON 11 MAY 2006
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     FILE 'HCAPLUS' ENTERED AT 08:24:58 ON 11 MAY 2006
L52       12023 SEA ABB=ON  PLU=ON  (ALCOHOL OR SOLVENT OR PVA OR ?PROPANOL?)(6A) (SHEET#### OR ELECTRODE)

     FILE 'HCAPLUS' ENTERED AT 08:25:43 ON 11 MAY 2006
L53      104263 SEA ABB=ON  PLU=ON  (ALCOHOL OR SOLVENT OR PVA OR ?PROPANOL?)(6A) (PERCENT#### OR CONCENTRATION OR
PARTS OR PPM OR WT OR WEIGHT OR CENT OR VOL OR VOLUME)
L54         914 SEA ABB=ON  PLU=ON  L52 AND L53
L55         111 SEA ABB=ON  PLU=ON  L20 AND L54
L56         111 SEA ABB=ON  PLU=ON  (L28 OR L29 OR L30 OR L31 OR L32 OR L33 OR
                L34 OR L35 OR L36 OR L37 OR L38) AND L55
L57        3232 SEA ABB=ON  PLU=ON  (L1 OR L2 OR L13 OR L18 OR L19 OR L25 OR
                L26 OR L27 OR (L33 OR L34 OR L35 OR L36))
L58          25 SEA ABB=ON  PLU=ON  L56 AND L57
L59          25 SEA ABB=ON  PLU=ON  L58 NOT (L46 OR L47 OR L51)

     FILE 'STNGUIDE' ENTERED AT 08:29:07 ON 11 MAY 2006

     FILE 'HCAPLUS' ENTERED AT 08:30:57 ON 11 MAY 2006
L60        1161 SEA ABB=ON  PLU=ON  (L57 OR L20 OR L56 OR L54 OR (L20 OR L21
                OR L22 OR L23 OR L24)) AND COLLECTOR

     FILE 'HCAPLUS' ENTERED AT 08:31:19 ON 11 MAY 2006
L61         398 SEA ABB=ON  PLU=ON  (L57 OR L20 OR L56 OR L54 OR (L20 OR L21
                OR L22 OR L23 OR L24)) AND (SHEET#### OR ELECTRODE)(4A)COLLECTOR
L62         396 SEA ABB=ON  PLU=ON  L61 NOT (L58 OR L46 OR L47 OR L51)

     FILE 'STNGUIDE' ENTERED AT 08:32:02 ON 11 MAY 2006

     FILE 'HCAPLUS' ENTERED AT 08:33:31 ON 11 MAY 2006
L63          25 SEA ABB=ON  PLU=ON  L62 AND (ELECTRODE OR SHEET######)(6A)(ALCO
                HOL OR OL OR HYDROX### OR MEOH OR PROH OR OH OR ETOH OR
                ?PROPANOL? OR PVA OR ?ETHANOL?)
L64          41 SEA ABB=ON  PLU=ON  L62 AND (ELECTRODE OR SHEET######)(6A)SOLVE
                NT
L65           6 SEA ABB=ON  PLU=ON  L63 AND L64

     FILE 'STNGUIDE' ENTERED AT 08:34:30 ON 11 MAY 2006

     FILE 'HCAPLUS' ENTERED AT 08:36:47 ON 11 MAY 2006
L66           0 SEA ABB=ON  PLU=ON  L62 AND SOLVENT(6A)(DILU###### OR THINN##### OR THIN OR CONCENTRATION)
L67          13 SEA ABB=ON  PLU=ON  L60 AND SOLVENT(6A)(DILU###### OR THINN##### OR THIN OR CONCENTRATION)
L68          13 SEA ABB=ON  PLU=ON  L67 NOT (L65 OR L58 OR L46 OR L47 OR L51)

     FILE 'STNGUIDE' ENTERED AT 08:37:58 ON 11 MAY 2006

     FILE 'HCAPLUS' ENTERED AT 08:40:30 ON 11 MAY 2006
L69        8837 SEA ABB=ON  PLU=ON  PASTE(6A)(ELECTRODE OR SHEET####)
L70        1808 SEA ABB=ON  PLU=ON  L69 AND (L1 OR L2 OR L11 OR L12 OR L13 OR
                L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21 OR L22 OR L23 OR L24)
L71         459 SEA ABB=ON  PLU=ON  L70 AND SOLVENT
L72          46 SEA ABB=ON  PLU=ON  L70 AND CONCENTRATION
L73         581 SEA ABB=ON  PLU=ON  L70 AND (PERCENT###### OR CENT OR WT OR
                WEIGHT OR PARTS OR PPM OR RATIO OR PROPORTION####)
L74          18 SEA ABB=ON  PLU=ON  L73 AND L72
L75         161 SEA ABB=ON  PLU=ON  L73 AND L71
L76          13 SEA ABB=ON  PLU=ON  L71 AND L72.
L77        4682 SEA ABB=ON  PLU=ON  PASTE(4A)COMPOSITION
L78        7688 SEA ABB=ON  PLU=ON  PASTE(4A)MIX#####
L79        1705 SEA ABB=ON  PLU=ON  PASTE(4A)COMPONENT
L80        3209 SEA ABB=ON  PLU=ON  PASTE(4A)COMPRIS######
L81          44 SEA ABB=ON  PLU=ON  (L74 OR L75 OR L76) AND (L77 OR L78 OR L79)
L82          84 SEA ABB=ON  PLU=ON  (L72 OR L74 OR L76 OR L81) NOT (L67 OR L65
                OR L58 OR L46 OR L47 OR L51)
L83       38222 SEA ABB=ON  PLU=ON  (ELECTRODE OR SHEET######)(6A)(PASTE OR
                SOLVENT OR ALCOHOL OR CONCENTRATION OR COLLECTOR)
L84          84 SEA ABB=ON  PLU=ON  L82 AND L83
L85        8837 SEA ABB=ON  PLU=ON  (ELECTRODE OR SHEET######)(6A)PASTE
L86        6298 SEA ABB=ON  PLU=ON  (ELECTRODE OR SHEET######)(6A)SOLVENT
L87        5059 SEA ABB=ON  PLU=ON  (ELECTRODE OR SHEET######)(6A)COLLECTOR
L88       13890 SEA ABB=ON  PLU=ON  (ELECTRODE OR SHEET######)(6A)CONCENTRATION
L89        5189 SEA ABB=ON  PLU=ON  (ELECTRODE OR SHEET######)(6A)ALCOHOL
L90          29 SEA ABB=ON  PLU=ON  L84 AND L85 AND (L86 OR L87 OR L88 OR L89)
L91           0 SEA ABB=ON  PLU=ON  L84 AND L86 AND (L87 OR L88 OR L89)
L92           0 SEA ABB=ON  PLU=ON  L84 AND L87 AND (L88 OR L89)
L93           2 SEA ABB=ON  PLU=ON  L84 AND L88 AND L89
L94          29 SEA ABB=ON  PLU=ON  L90 OR L93
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     FILE 'STNGUIDE' ENTERED AT 08:48:58 ON 11 MAY 2006

     FILE 'HCAPLUS' ENTERED AT 08:56:34 ON 11 MAY 2006
L95       21992 SEA ABB=ON  PLU=ON  ELECTRIC## DOUBLE LAYER OR EDL OR DLC OR
                ((DOUBLE LAYER###) AND (CAPACITOR OR SUPERCAPACITOR))
L96         160 SEA ABB=ON  PLU=ON  L95 AND ELECTRODE(6A)SHEET#####
L97         329 SEA ABB=ON  PLU=ON  L95 AND ELECTRODE(6A)COLLECTOR
L98          49 SEA ABB=ON  PLU=ON  L95 AND COLLECTOR(6A)SHEET#####
L99          25 SEA ABB=ON  PLU=ON  L96 AND L97 AND L98
L100         23 SEA ABB=ON  PLU=ON  L99 NOT (L94 OR L67 OR L65 OR L58 OR L46
                OR L47 OR L51)
L101            SEL PLU=ON  L100 1- RN :      35 TERMS

     FILE 'REGISTRY' ENTERED AT 08:58:38 ON 11 MAY 2006
L102         35 SEA ABB=ON  PLU=ON  L101
L103          3 SEA ABB=ON  PLU=ON  L102 AND L5

     FILE 'HCAPLUS' ENTERED AT 08:59:53 ON 11 MAY 2006
L104          3 SEA ABB=ON  PLU=ON  L100 AND (L103 OR ALCOHOL OR PVA OR
                ?ETHANOL? OR ?PROPANOL? OR MEOH OR PROH OR ETOH)

     FILE 'WPIX' ENTERED AT 09:02:03 ON 11 MAY 2006
L105          1 SEA ABB=ON  PLU=ON  US 6917094/PN
L106            SEL PLU=ON  L105 1- PRN :       2 TERMS
L107          2 SEA ABB=ON  PLU=ON  L106
L108            SEL PLU=ON  L107 1- PN :       5 TERMS

     FILE 'DPCI' ENTERED AT 09:02:32 ON 11 MAY 2006
L109          3 SEA ABB=ON  PLU=ON  L108/PN.G
L110          1 SEA ABB=ON  PLU=ON  L108
L111          4 SEA ABB=ON  PLU=ON  L110 OR L109
L112            SEL PLU=ON  L111 1- PN.D :       3 TERMS
L113          5 SEA ABB=ON  PLU=ON  L112
L114            SEL PLU=ON  L113 1- PN.D :      29 TERMS
L115         22 SEA ABB=ON  PLU=ON  L114/PN
L116            SEL PLU=ON  L115 1- PN :      91 TERMS

     FILE 'WPIX, JAPIO, HCAPLUS' ENTERED AT 09:04:04 ON 11 MAY 2006
L117         76 SEA ABB=ON  PLU=ON  L116
L118            SEL PLU=ON  L117 1- PN :     131 TERMS

     FILE 'DPCI' ENTERED AT 09:04:27 ON 11 MAY 2006
L119        285 SEA ABB=ON  PLU=ON  L118/PN.D
L120            SEL PLU=ON  L119 1- PN :    1252 TERMS

     FILE 'STNGUIDE' ENTERED AT 09:04:55 ON 11 MAY 2006

     FILE 'WPIX, JAPIO, HCAPLUS' ENTERED AT 09:05:25 ON 11 MAY 2006
L121        608 SEA ABB=ON  PLU=ON  L120
L122         73 SEA ABB=ON  PLU=ON  L121 AND ADHE#######
L123         14 SEA ABB=ON  PLU=ON  L121 AND CONCENTRATION
L124         64 SEA ABB=ON  PLU=ON  L121 AND SOLVENT
L125         41 SEA ABB=ON  PLU=ON  L121 AND ELECTRODE(6A) SHEET#####
L126        104 SEA ABB=ON  PLU=ON  L121 AND ELECTRODE(6A) COLLECTOR
L127         21 SEA ABB=ON  PLU=ON  L121 AND SHEET#####(6A) COLLECTOR
L128         80 SEA ABB=ON  PLU=ON  L121 AND BINDER
L129         19 SEA ABB=ON  PLU=ON  L121 AND PASTE
L130         44 SEA ABB=ON  PLU=ON  L122 AND (L123 OR L124 OR L125 OR L126 OR L127 OR L128 OR L129)
L131         11 SEA ABB=ON  PLU=ON  L123 AND (L124 OR L125 OR L126 OR L127 OR L128 OR L129)
L132         31 SEA ABB=ON  PLU=ON  L124 AND (L125 OR L126 OR L127 OR L128 OR L129)
L133         27 SEA ABB=ON  PLU=ON  L125 AND (L126 OR L127 OR L128 OR L129)
L134         41 SEA ABB=ON  PLU=ON  L126 AND (L127 OR L128 OR L129)
L135          9 SEA ABB=ON  PLU=ON  L127 AND (L128 OR L129)
L136          3 SEA ABB=ON  PLU=ON  L128 AND L129
L137        118 SEA ABB=ON  PLU=ON  L123 OR L127 OR L129 OR (L130 OR L131 OR
                L132 OR L133 OR L134 OR L135 OR L136)
L138         22 SEA ABB=ON  PLU=ON  L137 AND (ELECTRODE OR SHEET###### OR
                BINDER OR PASTE OR MIX#### OR COMPOS#######)(5A)(SOLVENT OR
                ALCOHOL OR PVA OR ?PROPANOL?)
L139          0 SEA ABB=ON  PLU=ON  L137 AND L6
L140          5 SEA ABB=ON  PLU=ON  L137 AND L9
L141          6 SEA ABB=ON  PLU=ON  L137 AND L8
L142         44 SEA ABB=ON  PLU=ON  L123 OR L131 OR L135 OR L136 OR L138 OR L140 OR L141
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L142 ANSWER 37 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:380987 HCAPLUS
DN 134:360381
ED Entered STN: 27 May 2001
TI Electrode for an electric double layer capacitor with high capacitance and small internal resistance and process for producing it
IN Ishikawa, Takamichi; Kuroki, Satoru; Suhara, Manabu
PA Asahi Glass Company, Ltd., Japan

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2001001590	A1	20010524	US 1998-212405	19981216 <--
	US 6383427	B2	20020507		
	US 6349027	B1	20020219	US 1999-253704	19990222 <--
	US 2002004973	A1	20020117	US 2001-947517	20010907
	US 6352565	B2	20020305		
	US 2002054472	A1	20020509	US 2001-987299	20011114 <--
	US 6525923	B2	20030225		
	US 2002080557	A1	20020627	US 2001-24377	20011221 <--
	US 6728095	B2	20040427		

AB A process for producing an electrode for an elec. double layer capacitor, which comprises extruding a mixture comprising a carbonaceous material, a polytetrafluoroethylene and a processing aid by **paste** extrusion, and rolling the obtained extruded product by rolling rolls to form it into a sheet shape.
IT **64-17-5**, Ethanol, processes
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(electrode for elec. double layer capacitor with high capacitance and small internal resistance and process for producing it using)
RN 64-17-5 HCAPLUS
CN Ethanol (9CI) (CA INDEX NAME)

---------- 5/11/06

L59 ANSWER 5 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:918805 HCAPLUS
DN 142:138228
ED Entered STN: 02 Nov 2004
TI Binders for electrodes of lithium secondary batteries
IN Han, Se Jong; Hwang, Deok Cheol; Kang, Byeong Hyeon; Kim, Gi Ho; Lee, In
- Seong; Lee, Je Wan; Lee, Yong Beom
PA Samsung SDI Co., Ltd., S. Korea

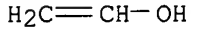
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	KR 2002018486	A	20020308	KR 2000-51819	20000902 <--
PRAI	KR 2000-51819		20000902		

AB This **electrode**-active **material** improves the ion conductivity of an electrode thereby enhancing the charging/discharging characteristics and lifetime of the battery. The **material** comprises an **electrode**-active **material**; a conductive **material** which comprises C powder and graphite powder in the ratio of 3:1 to **1:3** by **wt.**; a binder which comprises a bonding resin as a 1st binder and a 2nd **binder** capable of partially dissolving in an organic **solvent**, which is gelled, in the ratio of 1:3 to **3:1** by **wt.**; and a **solvent**. Preferably the 1st binder is selected from poly(vinylidene fluoride), hexafluoro-propylene-vinylidene fluoride copolymer, polyimide, poly(Me methacrylate) and their mixts. The 2nd binder is selected from poly(vinyl acetate), poly(vinyl chloride), poly(vinyl pyrrolidone), poly(vinyl **alc.**) and their mixts.

IT **9002-89-5**, Poly(vinyl **alcohol**) **9003-20-7**, Poly(vinyl acetate)
RL: DEV (Device component use); USES (Uses)
(**binders** for **electrodes** of lithium batteries)
RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O



---------- 5/11/06

L59 ANSWER 10 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:591489 HCAPLUS
DN 139:136088
ED Entered STN: 01 Aug 2003
TI Negative **electrode material** for lithium ion secondary battery
IN Ohta, Naoto; Nagaoka, Katsuhide; Hoshi, Kazuhito; Nozaki, Hidehiko; Tojo, Tetsuro; Sogabe, Toshiaki
PA Toyo Tanso Co., Ltd., Japan

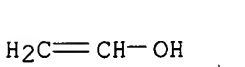
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2003063274	A1	20030731	WO 2003-JP631	20030124	<--
	TW 574764	B	20040201	TW 2003-92101614	20030124	<--
	EP 1478038	A1	20041117	EP 2003-731830	20030124	<-
	CN 1623242	A	20050601	CN 2003-802760	20030124	<--
	US 2005158550	A1	20050721	US 2003-501333	20030124	<--
PRAI	JP 2002-17270	A	20020125			
	JP 2002-319227	A	20021101			
	WO 2003-JP631	W	20030124			

AB A neg. **electrode material** for lithium ion secondary battery whose main raw material is a powdery graphite covered with a thermoplastic resin of ≤20 % carbonization yield so that the amount of a product of carbonization of the thermoplastic resin (e.g., **PVA**, PVC, etc.) is ≤ **10 wt. parts** per 100 **wt.** parts of graphite powder, characterized in that the powdery graphite covered with the thermoplastic resin exhibits a cumulative **vol.** of 0.012 to 40 μm diameter pores, as measured by the mercury penetration method, having been increased ≥5% over that before the thermoplastic resin covering; has a **vol.** of mesopores defined by IUPAC and measured according to the BJH method from the desorption isotherm defined by IUPAC, of ≤0.01 **cc**/g, which **vol.** is ≤60% of that before the thermoplastic resin covering; and an average particle diameter, as measured by a laser scattering particle size distribution meter, of 10 to 50 μm exhibiting a ratio of standard deviation to the average particle diameter (σ/D) of ≤0.02.

IT **9002-89-5**, Polyvinyl **alcohol**
RL: TEM (Technical or engineered material use); USES (Uses)
(neg. **electrode material** from graphite powder for lithium ion secondary battery)
RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O



---------- 5/11/06

L59 ANSWER 12 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:63411 HCAPLUS
DN 136:106250
ED Entered STN: 23 Jan 2002
TI Ceramic green sheets and multilayer laminated ceramic electronic parts
IN Ito, Eiji; Hosokawa, Takao; Yoneda, Yasunobu
PA Murata Mfg. Co., Ltd., Japan

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002020172	A2	20020123	JP 2000-196632	20000629
PRAI	JP 2000-196632		20000629		

AB The **sheet** comprises slurries containing ceramics, **binders**, and organic **solvents** that are shaped into thickness ≤5 μm. The organic **solvent** contained in the slurry consists of 70-95 **vol.**% 1st **solvent** having evaporation rate 110-550 (calculated by gravimetric method, based on 100 for Bu acetate) and **5**-30 **vol.**% 2nd **solvent** having evaporation rate 20-80. Electronic parts comprising of multilayered laminates of the ceramic green **sheets** and internal **electrodes** and equipped with external electrodes are also claimed. Generation of orange peel-like surface is prevented.

IT 64-17-5, Ethanol, uses 78-93-3, Methyl ethyl ketone, uses 108-88-3, Toluene, uses 109-86-4, Methylcellosolve 110-80-5, Cellosolve 110-82-7, Cyclohexane, uses 1330-20-7, Xylene, uses
RL: NUU (Other use, unclassified); USES (Uses)
(ceramic green sheets free of orange peel-like surfaces by using mixed **solvents** having certain evaporation ratios for muse in multilayered electronic parts)

manufacture of secondary batteries)

L59 ANSWER 14 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:638538 HCAPLUS
DN 131:265888
ED Entered STN: 08 Oct 1999
TI Pastes and their vehicles for formation of internal electrodes in multilayered ceramic capacitors
IN Sano, Kazuko
PA Sumitomo Metal Mining Co., Ltd., Japan

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11273987	A2	19991008	JP 1998-96847	19980325 <--
PRAI JP 1998-96847		19980325		

AB The vehicle comprises Et cellulose resin organic binders containing 49.5 -53 **wt.**% ethoxy groups and organic **solvent** mixts. consisting of fatty acid hydrocarbon, fatty acid higher **alc.** of m.p. 194-350°, and aromatic hydrocarbon. The pastes comprise metal powder and the above vehicle consisting of organic binder 1-8, fatty acid hydrocarbon 75-95, fatty acid higher **alc.** 1-20, and aromatic hydrocarbon **1**-50 **wt.**%. Sheet attack of dielec. green sheets are prevented.

IT **Alcohols**, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(long-chain; vehicles for internal **electrode** pastes free of **sheet** attacks for manufacture of multilayer ceramic capacitors)

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L59 ANSWER 17 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1989:81422 HCAPLUS
DN 110:81422
ED Entered STN: 04 Mar 1989
TI Porous carbon-fiber **sheets** for fuel-cell **electrodes** and filters
IN Mizuki, Tatsuro; Matsumoto, Tadayuki; Takizawa, Tamotsu; Miwa, Kishio
PA Toray Industries, Inc., Japan

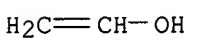
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63222080	A2	19880914	JP 1987-54589	19870310 <--
PRAI	JP 1987-54589		19870310		

AB The porous carbon-fiber sheets are manufactured by blending carbonizable short fibers, short carbon fibers, and dispersant, shaping, and heating to carbonize. Thus, coal-tar pitch short fibers (diameter 12 μm, average length 10 mm) 39, polyacrylonitrile-based short carbon fibers 39, polyvinyl **alc.**-vinyl acetate mixture **2 wt. parts** and a suitable amount of water were blended, shaped, dried at 80°, hot-pressed at 250° and 8 kg/cm2, and heated in N at 1500° for 5 min to give a 0.15 mm-thick porous sheet having porosity 78% d. 0. **4** g/**cm3**, gas permeability (in the thickness direction) 40 mm H2O/mm, and resistivity (in the thickness direction) 0.**1** Ω- **cm**.

IT **9002-89-5**, Polyvinyl **alcohol**
RL: USES (Uses)
(**binder**, in porous carbon-fiber **sheet** manufacture for **electrodes** and filters)
RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O



IT **67-56-1**, Methanol, uses and miscellaneous
RL: USES (Uses)
(dispersant, in porous carbon-fiber **sheet** manufacture for **electrodes** and filters)
RN 67-56-1 HCAPLUS
CN Methanol (8CI, 9CI) (CA INDEX NAME)

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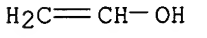
L59 ANSWER 18 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1987:105433 HCAPLUS
DN 106:105433
ED Entered STN: 05 Apr 1987
TI Manufacture of porous carbon materials for fuel cell and secondary battery electrodes
IN Marumo, Chiaki; Hayashi, Masao; Morimoto, Hironari
PA Kanebo, Ltd., Japan

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 61186210	A2	19860819	JP 1985-27357	19850213 <--
PRAI JP 1985-27357		19850213		

AB A mixture containing a phenolic resin (in a solution) 5-80, carbon fibers or their precursor 10-85, and a pore-forming agent (starch, its derivative, or cellulose derivative) **10**-70 **wt.**% is hardened and heated in a non-oxidative atmospheric to obtain a porous C **material** useful for **electrodes** in fuel cells and secondary batteries. The resin is a H2O-soluble resol. Poly(vinyl **alc.**) was dissolved in water; mixed with wheat starch at 70-80°; cooled to 40°; and mixed with a 65 **wt.**% resol (PR 961A) and a powdered reactive phenolic resin (Belpearl S 930, average size 15 μ), 37% formalin, p-toluene sulfonic acid, and 3-mm-long 14.5-μ-diameter carbon fibers at a **wt.** ratio of poly(vinyl **alc.**):starch:PR961A:Belpearl S930:carbon fiber = 4:51:20:10:15. The mixture was held at 60° and 80% relative humidity for 4 h, rolled into sheets, hardened at 80° for 24 h and at 120° for 4 h, and heated at 1000° in N for 8 h to obtain a porous C material having a bending strength of 82 kg/cm2, a porosity of 69% with an average pore size of 24 μ, and good machinability.
ST fuel cell porous carbon electrode; battery porous carbon electrode; polyvinyl **alc** carbon **electrode**; phenolic resin carbon
IT **9002-89-5**, Poly(vinyl **alcohol**)
RL: USES (Uses)
(in manufacture of porous carbon-**electrode material** for fuel cells and secondary batteries)
RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O



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L59 ANSWER 19 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:53635 HCAPLUS
DN 104:53635
ED Entered STN: 23 Feb 1986
TI Manufacture of porous grooved electrodes for fuel cells
IN Iwaki, Osamu; Awata, Yasuhei
PA Oji Paper Co., Ltd., Japan

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60167271	A2	19850830	JP 1984-21813	19840210 <--
PRAI	JP 1984-21813		19840210		

AB The title **electrodes** are prepared by **forming** **sheets** from a slurry containing organic fibers, pulp, and a binder; immersing in a polymer solution, pressing and heating to harden the sheets, forming grooves, and by heating to carbonize the sheets. Thus, electrodes were prepared by mixing polyacrylonitrile fibers 85, pulp 10, poly(vinyl **alc.**) fibers **5 wt.%**; immersing the **sheets formed** from the mixture in a 40% phenolic resin solution, drying at 105°, pressing and heating at 180° for 15 min, forming grooves (2.4 + 1.75 mm with spacing between grooves of 2.4 mm) on the sheets, and by pressing and heating in N at 1000° for 1 h. The method produces electrodes of high porosity, and fracturing on grooving is avoided.

L142 ANSWER 39 OF 44 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:378179 HCAPLUS
DN 132:355796
ED Entered STN: 07 Jun 2000
TI Electric double layer capacitor having an **electrode** bonded to a current **collector** via a carbon type conductive **adhesive** layer
IN Hiratsuka, Kazuya; Morimoto, Takeshi; Suhara, Manabu; Kawasato, Takeshi; Tsushima, Manabu
PA Asahi Glass Company, Ltd., Japan

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6072692	A	20000606	US 1998-168090	19981008 <--
US 6402792	B1	20020611	US 2000-515318	20000229 <--

PRAI US 1998-168090 A3 19981008
ECLA H01G009/00D

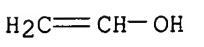
AB An elec. double layer capacitor including an electrode containing a carbonaceous material having a sp. surface area of at least 500 m2 /g, and an organic electrolytic solution capable of forming an elec. double layer at the interface with the electrode, wherein the **electrode** is bonded to a current **collector** via a C type conductive **adhesive** layer containing a conductive C material and a polyimide resin.

IT **96-48-0**, γ-Butyrolactone **9002-89-5**, Polyvinyl **alcohol**
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(elec. double layer capacitor having **electrode** bonded to current **collector** via carbon type conductive **adhesive** layer)

RN 9002-89-5 HCAPLUS
CN Ethenol, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5
CMF C2 H4 O



L142 ANSWER 19 OF 44 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
AN 1999-385111 [32] WPIX
DNN N1999-288446 DNC C1999-113192
TI Double layer capacitor used in combination with battery.
DC A21 A85 E19 G02 L03 V01
IN BECK, H C; NISSEN, O S; SCHOU, M
PA (DANI-N) DANIONICS AS
CYC 83
PI WO 9924995 A1 19990520 (199932)* EN 25 H01G009-155 <--

NOVELTY - A double layer capacitor used optionally in combination with a battery comprises a conductive coating containing a melamine resin **binder** at the interfaces between current **collectors** and **electrodes** to impart good mechanical and chemical integrity and flexibility.

DETAILED DESCRIPTION - A double layer capacitor comprises a conductive coating containing a melamine resin **binder** at the interfaces between current **collectors** and **electrodes**.

An INDEPENDENT CLAIM is for a method for the fabrication of the double layer capacitor comprising:

(a) mixing C black and graphites in an alcohol, a glycol or glycol ether with a polymerization reaction partner, optional dispersing agent and optional defoaming agent to produce a mill base;

(b) adding melamine resin and optional rheological control agent to obtain a uniform conductive coating **paste**;

(c) applying the conductive coating **paste** onto a current collector by coating or printing to produce a conductive coating;

(d) curing the conductive coating by heating to 100-150 deg. C for 10-30 min.;

(e) preparing an **electrode paste** from active C, **binder**, **solvent** and optional graphite and auxiliary materials;

(f) applying the electrode **paste** onto the conductive coating or printing to produce a conductive coating-electrode laminate;

(g) sandwiching a porous separator between two conductive coating-electrode laminates to form a capacitor laminate;

(h) confining the capacitor laminate in a polymer coated metal pouch;

(i) preparing the electrolyte solution by dissolving the electrolyte salt in the electrolyte **solvent**;

(j) impregnating the capacitor laminate with the electrolyte solution; and

(k) sealing the pouch.

USE - Double layer capacitor is used in combination with a battery, preferably in parallel combination with a battery (claimed).

ADVANTAGE - Double layer capacitor has good mechanical and chemical integrity and flexibility.

Dwg.0/0

TECH WO 9924995 A1 UPTX: 19990813

TECHNOLOGY FOCUS - ELECTRICAL POWER AND ENERGY - Preferred structure: Structure comprises metal foil **collector**, C **electrode** structure with a polymer **binder**, a non-aqueous electrolyte and conductive coatings comprising a melamine resin **binder** at the interface between current **collectors** and **electrodes**.

Current **collector** is a metal preferably Ni, Cu or Al.

Preferred resin: Melamine resin is an alkylated melamine formaldehyde resin, preferably methylated.

Preferred coating: Conductive coating comprises: 5-50%wt. (20-25%wt.) C black, 5-20 (10-15) graphite, 5-40 (15-25) a melamine resin **binder** and polymerization reaction partner, 25-85 (35-53) **solvent**, and 0-10 (2-5) auxiliary materials, preferably dispersants, defoaming agents and rheological control agents. C black consists of furnace black, acetylene black or lampblack. Graphite has a particle size of 0.5-20 mum.

Polymerization reaction product is an alkyd resin.
Preferred **solvent: Solvent** of conductive coating **mixture** comprises **alcohols** R1-OH;
R1 = 1-4C alkyl, or glycol or glycol ether R2-(OCHR3CH2)n-OH;
n = 1-3;
R2 = 1-4C alkyl; and
R3 = H or methyl.
Conductive coating comprises XZ302 screen printing dye.
Preferred electrolyte: Electrolyte salt comprises tetraalkylammonium salt preferably tetramethylammonium tetrafluoroborate, tetraethylammonium tetrafluoroborate, tetrabutylammonium tetrafluoroborate, tetramethylammonium hexafluorophosphate, tetraethylammonium hexafluorophosphate, or tetrabutylammonium hexafluorophosphate.
Electrolyte **solvent** comprises cabonate, lactone, or nitrile e.g. ethylene carbonate, propylene carbonate, dimethyl carbonate, diethyl carbonate, ethyl methyl carbonate, gamma-butyrolactone, gamma-valerolactone or acetonitrile.
Preferred Auxiliary Materials: Materials comprise nonionic, anionic, cationic or amphoteric dispersants, mineral oil or silicone oil defoaming agents.
Preferred method: Coating or printing technique is a screen printing, gravure printing or a slot die coating technique.

ABEX WO 9924995 A1 UPTX: 19990813
EXAMPLE - A mill base was prepared from 100 g C black (Shawinigan Black 100% compressed; RTM: Chevron), 50 g graphite (Lonza KS15; RTM: Timcal) and 2 g dispersing agent (Disperbyk 170; RTM: BYK Chemie), then added to 100 g butoxy-ethanol and 100 g 1-methoxy-propan-2-ol and milled in a pearlmill for 30 min. 70 g Alkyd resin reaction partner (Alftalat AC317; RTM: Hoechst) was added and the mill base mixed for a further 30 min. Under stirring, 30 g methylated melamine formaldehyde (Maprenal MF 927; RTM: Hoechst) and 3 g rheological control agent (Viscogel B7; RTM: Chimica Mineraria SpA) were added to the mill base to form the final conductive coating paste.

KW [1] 2211-0-0-2 CL; 2211-0-0-0 CL

L142 ANSWER 22 OF 44 JAPIO (C) 2006 JPO on STN
AN 2000-294462 JAPIO
TI ELECTRODE-FORMING AGENT FOR ACTIVATED CARBON ELECTRODE AND ACTIVATED CARBON ELECTRODE OBTAINED THEREFROM
IN MEGURO KAZUHIRO; SATO HIROSHI; TADA YASUHIRO
PA KUREHA CHEM IND CO LTD
PI **JP 2000294462** A 20001020 Heisei
AI JP 2000-24664 (JP2000024664 Heisei) 20000202
PRAI JP 1999-28439 19990205
SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 2000
IC ICM H01G009-058
ICS C08F214-22
AB PROBLEM TO BE SOLVED: To remarkably soften activated carbon **electrode** layers and enhance their **adhesion** to **collectors** by **composing** a **solvent** with a **mixture** of a good **solvent** and a plasticizer of vinylidene fluoride polymer compounds.
SOLUTION: An electrode-forming agent is composed of activated carbon, vinylidene fluoride polymer compounds and a **solvent**. Inherent viscosity of the vinylidene fluoride polymer compounds which serve as a **binder** is arranged at about 0.5-20.0 dl/g. The **solvent** is **composed** of a **mixture** of a good **solvent** and a plasticizer of vinylidene fluoride polymer compounds. The plasticizer has a average molecular weight of about 500 or more, and is composed of at least one kind of aliphatic polyesters. The **electrode**-forming agent 1a is coated on **collectors** 1b, and the **solvent** is selectively removed by vaporization to obtain polarizable electrodes 1. Then, a separator 2 is sandwiched between the two polarizable electrodes 1, which are sealed between a stainless-steel cap 3 and a stainless-steel can 4 containing the electrolyte solution 5 with a packing 6 to form an electric double-layer capacitor.

L142 ANSWER 25 OF 44 JAPIO (C) 2006 JPO on STN
AN 1999-154630 JAPIO
TI POLAR ELECTRODE AND MANUFACTURE THEREOF
IN MUSHIAKI NAOFUMI; INOUE TAKASHI; IKEGAMI AKI; OKADA YUICHI
PA JAPAN GORE TEX INC
PI **JP 11154630** A 19990608 Heisei
AI JP 1998-268452 (JP10268452 Heisei) 19980922
PRAI JP 1997-257121 19970922
SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1999
IC ICM H01G009-058
ICS H01G009-016
AB PROBLEM TO BE SOLVED: To improve bond strength and contact condition, by laminating a **collector** on an electrode **sheet** through a conductive adhesive layer containing conductive C and **binder**, so as to penetrate part of this adhesive layer in pores of the electrode sheet at a specified percent age with respect to the depth of the electrode sheet.
SOLUTION: An electrode comprises a conductive adhesive layer 13 containing a conductive adhesive composed of conductive C and **binder**. This layer can exist in the form of penetration in pores 12 of an electrode sheet 12, using the conductive adhesive dispersed in a dispersant 13A. After removal of the dispersant, anchor effect improves bond strength of a **collector** 11 to the **sheet** 12. The penetration percentage of the adhesive layer 13 composed of such conductive adhesive into pores 12a of the sheet 12 is over 15%, pref. over 0.25% and below 30%, pref. 15% of the thickness of the sheet 12.

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L59 ANSWER 13 OF 25 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:823121 HCAPLUS
DN 133:364436
ED Entered STN: 24 Nov 2000
TI Manufacture of secondary battery electrodes and secondary batteries
IN Matsumoto, Akira; Soga, Iwao
PA Mitsubishi Chemical Corp., Japan

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000323131	A2	20001124	JP 1999-133809	19990514 <--
PRAI	JP 1999-133809		19990514		

AB The electrodes are manufactured by application of a solution, comprising of an active material and/or a conductive material, a **binder**, and a **solvent**, onto a conductive **electrode** substrate followed by its drying. The content of the **solvent** in the solution is controlled to satisfy T = 45-1000, where T (s) is the time needed for the coating to dry to **10 wt.% solvent** content.
The electrodes may be manufactured by a 2-step process, 1st by application of a solution containing conductive material, a **binder**, and a **solvent** followed by formation of an active material-containing layer, e.g. by application of a solution containing active material, a **binder**, and a **solvent**. Manufacture of secondary battery by formation of the electrode(s) by the above stated process is also claimed. **Electrodes** with strongly adhered active **material** layers are prepared Safe batteries with excellent cycle and rate characteristics are prepared

IT Battery **electrodes**
Secondary batteries
Solvents
(control of **solvent** content in active material solns. in manufacture of secondary batteries)

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	401	29/25.03.ccor.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/11 16:16
L2	229	L1 and @ad<"20021129"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/11 16:10
L3	411	361/502.ccor.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/11 16:10
L4	304	L3 and @ad<"20021129"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/11 16:10
L5	812	29/25.03.ccor. 361/502.ccor.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/11 16:16
L6	10	L5 and (alcohol).clm.	US-PGPUB	OR	ON	2006/05/11 16:17